

FORM PTO-1390 (Modified)
(REV. 10/95)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371**

A32002-PCT-USA

U.S. APPLICATION NO. (IF KNOWN, SEE 37-CFR

09/155843INTERNATIONAL APPLICATION NO.
PCT/FR97/00605INTERNATIONAL FILING DATE
3 April 1997PRIORITY DATE CLAIMED
9 April 1996

TITLE OF INVENTION

WOOD GLUE INCORPORATING AN INSECTICIDE

APPLICANT(S) FOR DO/EO/US

JOBIC, Sylvestre

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
 - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ A copy of the International Search Report (PCT/ISA/210).
8. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☐ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 18 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
A **SECOND** or **SUBSEQUENT** preliminary amendment.
16. ☐ A substitute specification.
17. ☐ A change of power of attorney and/or address letter.
18. ☒ Other items or information:

Forms **PCT/RO/101, PCT/IB/332, PCT/IB/304, and PCT/IB/305.**Express Mail No. **EE828788134US**Date of Deposit: **October 6, 1998**

09155843-122208

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR	INTERNATIONAL APPLICATION NO. PCT/FR97/00605	ATTORNEY'S DOCKET NUMBER A32002-PCT-USA
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19. The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

Search Report has been prepared by the EPO or JPO	\$910.00
International preliminary examination fee paid to USPTO (37 CFR 1.482)	\$700.00
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2))	\$770.00
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO	\$1,040.00
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4)	\$96.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492 (e)).	<input type="checkbox"/> 20 <input type="checkbox"/> 30	\$1,040.00
		\$0.00

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	16 - 20 =	0	x \$22.00	\$0.00
Independent claims	- 3 =	0	x \$80.00	\$0.00

Multiple Dependent Claims (check if applicable). ☐

TOTAL OF ABOVE CALCULATIONS =

	\$1,040.00
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Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) (check if applicable). ☐

SUBTOTAL =

	\$1,040.00
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Processing fee of **\$130.00** for furnishing the English translation later than months from the earliest claimed priority date (37 CFR 1.492 (f)). ☐ 20 ☐ 30 +

TOTAL NATIONAL FEE =

	\$1,040.00
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Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) (check if applicable). ☐

TOTAL FEES ENCLOSED =

	\$1,040.00
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	Amount to be refunded	\$
	charged	\$

CALCULATIONS PTO USE ONLY

☒ A check in the amount of **\$1,040.00** to cover the above fees is enclosed.

☐ Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.

☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **02-4377** A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Janet M. MacLeod
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Janet M. MacLeod
SIGNATURE

Janet M. MacLeod

NAME

35,263

REGISTRATION NUMBER

6 September 1998

DATE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : JOBIC, Sylvestre
Serial No. : To be assigned
Filed : October 6, 1998
For : WOOD GLUE INCORPORATING AN INSECTICIDE

PRELIMINARY AMENDMENT

Express Mail Mailing No. EE828788134US

Date of Deposit - October 6, 1998

Assistant Commissioner of Patent
Box PCT
Washington, D.C., 20231.

Sir or Madam:

Preliminary to the examination of this application, please enter the following amendments:

IN THE CLAIMS:

Claim 3, Line 1: please replace "one of the preceding claims" with
--claim 2--.
Claim 4, Line 1: please replace "one of the preceding claims" with
--claim 3--.
Claim 5, Line 1: please replace "one of the preceding claims" with
--claim 4--.
Claim 7, Line 1: please delete "one of" and "and 6".

Claim 8, Line 1: please delete "one of" and "to 4", and replace "claims
with --claim--.

Claim 10, Line 1: please delete "one of" and "and 9", and replace "claims"
with --claim--.

Claim 11, Line 1: please replace "one of the preceding claims" with
--claim 10--.

Claim 12, Line 3: please delete "one of" and "to 3", and replace "claims"
with --claim--.

Claim 13, Line 4: please delete "one of" and "to 3", and replace "claims"
with --claim--.

Claim 14, Line 5: please delete "one of" and "to 3", and replace "claims"
with --claim--.

Claim 15, Line 1: please replace "one of the preceding claims" with
--claim 14--.

Claim 16, Line 1: please delete "one of" and "to 15", and replace "claims"
with --claim--.

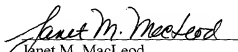
REMARKS

This application includes multiple claim dependencies. The above amendment removes such multiple claim dependencies, and the filing fee for this application has been computed on the basis that no dependent claim depends from more than one preceding claim.

Entry of this amendment and an early examination on the merits are respectfully solicited.

Respectfully submitted,

Dated: October 6, 1998


Janet M. MacLeod
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WO 97/37543

PCT/FR97/00605

Wood adhesive comprising an insecticide

The present invention relates to the field of adhesives intended to bond wood and comprising an insecticide.

5 Adhesives intended for the bonding of wood or of wood particles are widely known.

 These wood adhesives are generally of polymeric type, in particular based on thermoplastic or thermosetting polymers.

10 These wood adhesives are applied in many fields and in particular in the production of wood-based materials and more specifically wood-based materials of chipboard, plywood, laminate or veneer type and the like.

15 These materials are used in the construction of buildings, houses and blocks of flats, as well as in fitting out the said buildings, houses and blocks of flats, such as, for example, furniture.

 Moreover, it is known that these materials
20 are the subject of attacks by insects, in particular termites.

 In point of fact, the number of products which can be used in practice for protecting wood against attacks by insects, in particular termites, is
25 rather limited, all the more so since several of them have been dropped for reasons of environmental protection, such as, for example, the so-called

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organochlorinated products.

The need thus remains for wood adhesives conferring protection against insects, in particular termites, on materials based on bonded wood.

5 One aim of the invention is to meet the existing requirements as regards adhesives comprising an insecticide which are involved in the manufacture of wood-based materials.

10 Another aim of the invention is to provide adhesives for the manufacture of wood-based materials which do not have the disadvantages of the known products.

15 Another aim of the invention is to provide adhesives for the manufacture of wood-based materials which are resistant to insects, in particular to termites.

 Another aim of the invention is to provide wood-based materials which are resistant to insects, in particular to termites.

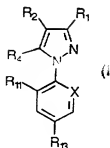
20 Another aim of the invention is to provide wood-based materials of chipboard, plywood, laminate or veneer type which are immunized against perforations caused by insects.

25 It has now been found that these aims could be achieved, in all or in part, by virtue of the wood adhesives according to the invention.

 The invention consequently relates to wood adhesives comprising an insecticidal active material of

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formula (I):



in which:

R_1 is CN or methyl;

R_2 is $S(O)_n R_3$;

5 R_3 is alkyl or haloalkyl;

R_4 represents a hydrogen or halogen atom or an $NR_5 R_6$, $-S(O)_n R_7$, $-C(O)R_7$, or $-C(O)O-R_7$, alkyl, haloalkyl or $-OR_8$ radical or an $-N=C(R_9)(R_{10})$ radical;

10 R_5 and R_6 represent, independently of one another, the hydrogen atom or an alkyl, haloalkyl, $-C(O)alkyl$ or $-S(O)_x CF_3$ radical or alternatively R_5 and R_6 can together form a divalent alkylene radical which can be interrupted by one or two divalent heteroatoms, such as oxygen or sulphur;

15 R_7 represents an alkyl or haloalkyl radical;

R_8 represents an alkyl or haloalkyl radical or the hydrogen atom;

R_9 represents an alkyl radical or the hydrogen atom;

20 R_{10} represents a phenyl or heteroaryl group optionally substituted by one or a number of halogen

atoms or groups such as -OH, -O-alkyl, -S-alkyl, cyano or alkyl;

R_{11} and R_{12} represent, independently of one another, a hydrogen or halogen atom;

5 R_{13} represents a halogen atom or a haloalkyl, haloalkoxy, $-S(O)_qCF_3$ or $-SF_5$ group;

m , n , q and r represent, independently of one another, an integer equal to 0, 1 or 2;

X represents a trivalent nitrogen atom or a
10 C- R_{12} radical, the other three valencies of the carbon atom forming part of the aromatic ring;

with the proviso that, when R_1 is methyl, then R_2 is haloalkyl, R_4 is NH_2 , R_{11} is Cl, R_{13} is CF_3 and X is N.

15 The term "alkyl" present in the definitions of the radicals of the compound of formula (I) represents a linear or branched alkyl radical containing from 1 to 6 carbon atoms.

The term "alkoxy" present in the definitions
20 of the radicals of the compound of formula (I) represents a linear or branched alkoxy radical containing from 1 to 6 carbon atoms.

The term "alkylene" present in the definitions of the radicals of the compound of formula
25 (I) represents an alkylene radical containing from 1 to 4 carbon atoms.

The term "halogen" and the prefix "halo-" present in the definitions of the radicals of the

compound of formula (I) mean respectively fluorine, chlorine, bromine or iodine and fluoro-, chloro-, bromo- or iodo-.

The term "heteroaryl" present in the definitions of the radicals of the compound of formula (I) represents an aromatic radical containing 5 or 6 atoms, one or a number among which can optionally be chosen from nitrogen, oxygen and sulphur.

A preferred class of compounds of formula (I) is composed of the compounds such that R_1 is CN and/or R_3 is haloalkyl and/or R_4 is NH_2 and/or R_{11} and R_{12} are, independently of one another, a halogen atom and/or R_{13} is haloalkyl.

A compound of formula (I) which is very particularly preferred in the present invention is 1-[2,6- Cl_2 -4- CF_3 -phenyl]-3-CN-4-[SO- CF_3]-5- NH_2 -pyrazole, hereinafter known as Compound A.

Compounds of formula (I) can be prepared according to one or other of the processes described in Patent Applications WO-A-87/3781, WO-A-93/6089, WO-A-94/21606 or EP-A-295,117 or any other process coming within the competence of the person skilled in the art who is a specialist in chemical synthesis.

The invention consequently relates to wood adhesives containing an insecticide of formula (I).

In the present invention, wood adhesives is understood to mean adhesives, binding or bonding agents or glues intended for the bonding of wood, whether in

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the form of sheets, laths, particles, and the like, to itself or to another substrate.

The wood adhesives which are used as base in the preparation of the wood adhesives containing an insecticide according to the invention are those known to the person skilled in the art and more particularly adhesives based on thermosetting resins and adhesives based on thermoplastic resins.

Adhesives based on thermosetting resins confer high mechanical strength on the materials and for this reason are more particularly used in the production of materials for furniture or frameworks.

Mention may be made, among adhesives based on thermosetting resins used in the present invention, without implied limitation, of urea-formaldehyde adhesives, phenol-formaldehyde adhesives, resorcinol-formaldehyde adhesives, melamine-formaldehyde adhesives and silicone adhesives.

By way of example, the phenol-formaldehyde adhesives will be used more particularly in the production of plywoods. Resorcinol-formaldehyde adhesives will be preferred, because of their excellent resistance to ageing and to weathering, for example for the manufacture of materials which can be used externally and/or which require a high guarantee of stability with respect to the weather.

Mention may be made, among adhesives based on thermoplastic resins, without implied limitation, of

vinyl adhesives and polyacrylic adhesives.

A type of wood adhesive based on thermoplastic resin which is preferred for the present invention is composed of vinyl adhesives, for example vinyl resins, in particular poly(vinyl acetate), or, for example, adhesives based on acetochlorides, poly(vinyl alcohol), poly(vinyl acetal)s, poly(vinyl ether)s or vinyl acetate and more particularly adhesives based on ethylene-vinyl acetate copolymer.

Another category of adhesives to which the present invention relates is composed of elastomer-based adhesives.

The wood adhesives according to the invention can be composed of a single type of adhesive or of a mixture of adhesives (mixed adhesives).

The wood adhesives according to the present invention can be provided in the form of more or less viscous or pasty liquids, in the form of aqueous or alcoholic solutions, as emulsions, in the form of powders which are soluble in water or alcohol or in the form of films which can be applied directly. Finally, in the case of adhesives based on thermoplastic resins, these can be provided in the form of heat-fusible preparations.

The combined adhesives described above constitute a non-limiting list. It is clearly understood that any type of adhesive which is suitable for the bonding of wood is suitable for the present

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invention. As a general rule, the choice of the wood adhesive will be determined by the person skilled in the art who is a specialist in the production of wood-based materials, according to the desired final application of the material.

The wood adhesives according to the invention are prepared by mixing a wood adhesive known per se with an effective amount of insecticidal active material of formula (I).

Effective amount of active material is understood to mean the amount of active material to be mixed with the adhesive so as to obtain wood-based materials which are effectively protected from attacks by insects.

These effective amounts of active material of formula (I) are amounts generally of between 0.5 and 150 g/l, preferably of between 5 and 50 g/l, of wood adhesive. When the wood adhesive according to the invention is packaged in the form of a powder, this is such that the wood adhesive, once in solution or emulsion, contains 0.5 to 150 g/l, preferably 5 to 50 g/l, of insecticidal active material of formula (I).

The invention also relates to wood-based materials composed of a plurality of flat layers of wood and/or of a plurality of wood particles bonded to one another by a wood adhesive comprising an insecticidal active material of formula (I).

In the materials of the invention, the

insecticidal active material is thus situated essentially in the adhesive, it being possible for this active material subsequently possibly to migrate in the wood-based material.

5 The materials based on wood bonded according to the invention are in particular materials based on chipboard, plywood, laminate and veneer.

 The wood chipboard materials according to the invention have a thickness generally of between 5 and
10 100 mm, preferably between 7 and 80 mm.

 By way of example, and depending on the final destination of the chipboard-based materials, the thickness will preferably be between 7.5 and 15 mm for the thinnest materials, between 10 and 40 mm for
15 standard materials and between 35 and 80 mm for materials subjected to high stresses.

 The particles capable of constituting the wood chipboard materials according to the invention are of a type known per se. They can in particular be
20 fibres, flakes, slices, strips of the most varied lengths, specks, chips, parings, shavings, and the like.

 These particles have a size generally varying from a few hundredths of a millimetre to 5 cm. More
25 particularly, their size is advantageously between 0.1 mm and 3 cm, preferably between 0.1 cm and 2.5 cm.

 The plywood materials according to the invention are composed of a plurality of flat layers,

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preferably of 3 to 7 layers. The flat layers capable of constituting the plywood materials according to the invention are positioned with respect to one another so that their fibres are in general directions which cross each other and are even preferentially transverse with respect to one another, generally forming an angle of 90° between them.

Each of the layers has a thickness ranging from 0.5 mm to 2 cm, preferably from 1 mm to 1 cm.

These plywood-based materials can be composites, that is to say contain one or a number of layers of wood chipboard, of paper, of plastic film and the like coming in between the flat layers, or alternatively contain, on one of the faces or both faces, a solid wood or wood chipboard layer, which may or may not be decorative, or alternatively paper.

The final thickness of the plywood-based materials according to the invention is between 1 mm and 10 cm, preferably between 5 mm and 8 cm.

The different thicknesses, particle sizes, number of layers and the like presented above are given by way of information and should not be understood as limits from the viewpoint of the person skilled in the art.

The wood materials according to the invention are obtained in a way which is also known per se, in particular by hot or cold pressing of particles or flat layers with the adhesive, in the presence or absence of

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a catalyst, according to techniques well known to the person skilled in the art. The type of adhesive and its presentation are also chosen by the person skilled in the art according to the desired final destination of the bonded wood-based material.

According to the invention, the insecticidal active material is situated in this adhesive, which makes possible ready and simple manufacture of the products according to the invention, avoiding in particular the need to treat large volumes of material once in the finished or completed state.

The materials according to the invention are protected against attacks by insects, in particular against attacks of perforating type. As insects capable of generating such attacks, termites are one of the main agents.

The materials according to the invention are thus immunized against perforations originating from insects, in particular termites.

In addition to their immunity against perforations, the materials of plywood, laminate or veneer type according to the invention produce a barrier effect with respect to the passage of insects, in particular termites.

The amount of compound of formula (I) in the wood adhesives according to the invention is an amount which is effective in protecting the bonded wood-based materials against perforations.

These amounts which are effective for protection are amounts which confer on the materials concentrations of active material generally of between 0.05 and 15 g/m², preferably of between 0.5 and 5 g/m².

5 The following examples, given without implied limitation, illustrate the invention and show how it can be put into practice.

Example 1: Preparation of an insecticidal vinyl wood adhesive

10 An adhesive is prepared by mixing 10 g of the compound (A) with 1 litre of a wood adhesive based on ethylene-vinyl acetate copolymer. This crosslinkable adhesive is used directly in the production of wood chipboard or plywood.

15 Example 2: Preparation of an insecticidal melamine-formaldehyde wood adhesive

 An insecticidal adhesive is prepared by mixing a powdered melamine-formaldehyde resin containing 25 g of active material (A) with 1 litre of
20 water. This thermosetting resin can be used in the manufacture of plywood.

Example 3: Preparation of a chipboard

 Wood chipboard is prepared by hot compression with the crosslinkable vinyl adhesive described in
25 Example 1. The wood/adhesive ratio is such that the

wood chipboard material contains 1 g/m² of insecticidal active material (A).

A sheet of this wood chipboard with an area of 1 m² separates two chambers each comprising 200 termites with a choice of feeding and a water supply in order to ensure the survival, whatever happens, of the said termites.

After 21 days, it is observed that the sheet shows no signs either of perforation or of the beginning of perforation.

Example 4: Preparation of a plywood

Plywood is prepared by hot compression with the adhesive described in Example 2. The wood/adhesive ratio is such that the plywood material contains 1 g/m² of insecticidal active material (A).

A sheet of this plywood with an area of 1 m² separates two chambers each comprising 200 termites with a choice of feeding and a water supply in order to ensure the survival, whatever happens, of the said termites.

After 21 days, it is observed that the plywood sheet shows no signs either of perforation or of the beginning of perforation.

Example 5: Preparation of a laminate

Laminated wood is prepared by hot compression with the resin described in Example 2. The

wood/adhesive ratio is such that the laminated wood material contains 2.5 g/m² of insecticidal active material (A).

5 A sheet of this laminated wood with an area of 1 m² separates two chambers each comprising 200 termites with a choice of feeding and a water supply in order to ensure the survival, whatever happens, of the said termites.

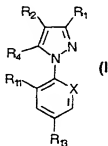
10 After 21 days, it is observed that the laminated wood sheet shows no signs either of perforation or of the beginning of perforation.

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CLAIMS

1. Wood adhesive, characterized in that it comprises an insecticidal active material of formula

(I):



5 in which:

R₁ is -CN or methyl;

R₂ is -S(O)_nR₃;

R₃ is alkyl or haloalkyl;

R₄ represents a hydrogen or halogen atom or an

10 -NR₆R₆, -S(O)_nR₇, -C(O)R₇ or -C(O)O-R₇, alkyl, haloalkyl
or -OR₈ radical or an -N=C(R₉)(R₁₀) radical;

R₅ and R₆ represent, independently of one
another, the hydrogen atom or an alkyl, haloalkyl,
-C(O)alkyl or -S(O)_nCF₃ radical or alternatively R₅ and

15 R₆ can together form a divalent alkylene radical which
can be interrupted by one or two divalent heteroatoms,
such as oxygen or sulphur;

R₇ represents an alkyl or haloalkyl radical;

R₈ represents an alkyl or haloalkyl radical or

20 a hydrogen atom;

R₉ represents an alkyl radical or a hydrogen

atom;

R_{10} represents a phenyl or heteroaryl group optionally substituted by one or a number of halogen atoms or groups such as -OH, -O-alkyl, -S-alkyl, cyano or alkyl;

R_{11} and R_{12} represent, independently of one another, a hydrogen or halogen atom;

R_{13} represents a halogen atom or a haloalkyl, haloalkoxy, $-S(O)_qCF_3$ or $-SF_5$ group;

m, n, q and r represent, independently of one another, an integer equal to 0, 1 or 2;

X represents a trivalent nitrogen atom or a C- R_{12} radical, the other three valencies of the carbon atom forming part of the aromatic ring;

with the proviso that, when R_1 is methyl, then R_3 is haloalkyl, R_4 is NH_2 , R_{11} is Cl, R_{13} is CF_3 and X is N.

2. Wood adhesive according to claim 1, in which the active material of formula (I) is such that R_1 is CN and/or R_3 is haloalkyl and/or R_4 is NH_2 and/or R_{11} and R_{12} are, independently of one another, a halogen atom and/or R_{13} is haloalkyl.

3. Wood adhesive according to one of the preceding claims, in which the active material of formula (I) is

1-[-2,6-Cl₂-4-CF₃-phenyl]-3-CN-4-[SO-CF₃]-5-NH₂-pyrazole.

4. Wood adhesive according to one of the preceding claims, comprising an amount of product of

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formula (I) which is effective against insects, in particular termites.

5 5. Wood adhesive according to one of the preceding claims, which is based on thermoplastic resin.

6. Wood adhesive according to claim 5, which is based on thermoplastic vinyl resin.

7. Wood adhesive according to one of claim 5 and 6, which is based on ethylene-vinyl acetate copolymer.

8. Wood adhesive according to one of claims 1 to 4, which is based on thermosetting resin.

9. Wood adhesive according to claim 8, which is based on thermosetting phenol-formaldehyde resin.

10. Wood adhesive according to one of claims 8 and 9, which is based on resorcinol-formaldehyde resin.

11. Wood adhesive according to one of the preceding claims, comprising an amount of product of formula (I) of between 0.5 and 150 g/l, preferably of between 5 and 50 g/l.

12. Wood-based material bonded with an adhesive comprising an amount of insecticidal active material of formula (I), as defined in one of claims 1 to 3, which is effective against insects, in particular termites.

13. Wood-based material according to claim

12, composed of a plurality of wood particles bonded to one another by an adhesive comprising an insecticidal active material of formula (I) as defined in one of claims 1 to 3.

5 14. Wood-based material according to claim 12, composed of a plurality of flat wood layers bonded to one another by an adhesive comprising an insecticidal active material of formula (I) as defined in one of claims 1 to 3.

10 15. Material according to one of the preceding claims, comprising an amount of product of formula (I) as defined in one of claims 1 to 3 of between 0.05 and 15 g/m², preferably of between 0.5 and 5 g/m².

15 16. Material according to one of claims 12 to 15, based on wood bonded by an adhesive according to claims 4 to 10.

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**COMBINED DECLARATION
AND POWER OF ATTORNEY**

(Original, Design, National Stage of PCT, Divisional, Continuation or C-I-P Application)

As a below named inventor, I hereby declare that: I, SYLVESTRE JOBIC
My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

WOOD GLUE INCORPORATING AN INSECTICIDE This declaration is of the following type:

- ☒ original
☐ design
☐ national stage of PCT.
☐ divisional
☐ continuation
☐ continuation-in-part (C-I-P)

the specification of which: *(complete (a), (b), or (c))*

- (a) ☐ is attached hereto.
(b) ☒ [X] was filed on October 6, 1998 as Application Serial No. 09/155,843 and was amended on *(if applicable)*.
(c) ☒ [X] was described and claimed in PCT International Application No. PCT/FR97/00605 filed on 03/04/97 and was amended on *(if applicable)*.

Acknowledgement of Review of Papers and Duty of Candor

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of the subject matter claimed in this application in accordance with Title 37, Code of Federal Regulations § 1.56.

- ☐ In compliance with this duty there is attached an information disclosure statement. 37 CFR 1.98.

Priority Claim

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or of any PCT International Application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT International Application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application on which priority is claimed

(complete (d) or (e))

- (d) ☐ no such applications have been filed.
(e) ☒ [X] such applications have been filed as follows:

01/04/1999 FVULPE	00000227-09155843
01 FC:115	110.00 UP
02 FC:154	130.00 UP

PRIOR FOREIGN/PCT APPLICATION(S) FILED WITHIN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION				
COUNTRY	APPLICATION NO.	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
FRANCE	96 04694	09 April 1996		[X] YES NO []
FRANCE	96 04695	09 April 1996		[X] YES NO []
				[] YES NO []
ALL FOREIGN APPLICATION(S), IF ANY, FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN) PRIOR TO SAID APPLICATION				
				[] YES NO []
				[] YES NO []
				[] YES NO []

Claim for Benefit of Prior U.S. Provisional Application(s)

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Provisional Application Number	Filing Date

Claim for Benefit of Earlier U.S./PCT Application(s) under 35 U.S.C. 120 (complete this part only if this is a divisional, continuation or C-I-P application)

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose information as defined in Title 37, Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

Power of Attorney

As a named inventor, I hereby appoint Dana M. Raymond, Reg. No. 18,540; Frederick C. Carver, Reg. No. 17,021; Francis J. Hone, Reg. No. 18,662; Joseph D. Garon, Reg. No. 20,420; Arthur S. Tenser, Reg. No. 18,839; Ronald B. Hildreth, Reg. No. 19,498; Thomas R. Nesbitt, Jr., Reg. No. 22,075; Robert Neuner, Reg. No. 24,316; Richard G. Berkley, Reg. No. 25,465; Richard S. Clark, Reg. No. 26,154; Bradley B. Geist, Reg. No. 27,551; James J. Maune, Reg. No. 26,946; John D. Mumane, Reg. No. 29,836; Henry Tang, Reg. No. 29,705; Robert C. Scheinfeld, Reg. No. 31,300; John A. Fogarty, Jr., Reg. No. 22,348; Louis S. Sorell, Reg. No. 32,439 and Rochelle K. Seide Reg. No. 32,300 of the firm of BAKER & BOTTS, L.L.P., with offices at 30 Rockefeller Plaza, New York, New York 10112, as attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith

SEND CORRESPONDENCE TO: BAKER & BOTTS, L.L.P. <u>30 ROCKEFELLER PLAZA, NEW YORK, N.Y. 10112</u> <u>CUSTOMER NUMBER: 21003</u>	DIRECT TELEPHONE CALLS TO: BAKER & BOTTS, L.L.P. (212) 705-5000
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section

1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF SOLE OR FIRST INVENTOR	LAST NAME JOBIC	FIRST NAME SYLVESTRE	MIDDLE NAME	
RESIDENCE & CITIZENSHIP	CITY ALIX	STATE or FOREIGN COUNTRY FRANCE	COUNTRY OF CITIZENSHIP FRANCE	
POST OFFICE ADDRESS	POST OFFICE ADDRESS LE PERROUX	CITY ALIX	STATE or COUNTRY FRANCE	ZIP CODE 69380
DATE 12-10-98	SIGNATURE OF INVENTOR			
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RESIDENCE & CITIZENSHIP	CITY	STATE or FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE or COUNTRY	ZIP CODE
DATE	SIGNATURE OF INVENTOR			
FULL NAME OF THIRD JOINT INVENTOR, IF ANY	LAST NAME	FIRST NAME	MIDDLE NAME	
RESIDENCE & CITIZENSHIP	CITY	STATE or FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE or COUNTRY	ZIP CODE
DATE	SIGNATURE OF INVENTOR			
FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	LAST NAME	FIRST NAME	MIDDLE NAME	
RESIDENCE & CITIZENSHIP	CITY	STATE or FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE or COUNTRY	ZIP CODE
DATE	SIGNATURE OF INVENTOR			
FULL NAME OF FIFTH JOINT INVENTOR, IF ANY	LAST NAME	FIRST NAME	MIDDLE NAME	
RESIDENCE & CITIZENSHIP	CITY	STATE or FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE or COUNTRY	ZIP CODE
DATE	SIGNATURE OF INVENTOR			
FULL NAME OF SIXTH JOINT INVENTOR, IF ANY	LAST NAME	FIRST NAME	MIDDLE NAME	
RESIDENCE & CITIZENSHIP	CITY	STATE or FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE or COUNTRY	ZIP CODE
DATE	SIGNATURE OF INVENTOR			